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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,164	04/13/2001	Shujin Zhang	CISCO-3840	4870

7590

08/06/2004

David B. Ritchie
Thelen Reid & Priest LLP
P. O. Box 640640
San Jose, CA 95164-0640

EXAMINER

PATEL, NIKETA I

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/835,164	ZHANG ET AL.	
Examiner	Art Unit	
Niketa I. Patel	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/6/04</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8-12, 21-26, 29-33, 36-40, 42 and 50-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Beser U.S. Patent Number: 6,189,102 (hereinafter referred to as 'Beser'.)

4. Referring to claims 1, 8, 21, 25, 29, 36, 42, 50, 51, Beser teaches a method, an apparatus and a programmable storage device for issuing or renewing a host address, comprising: retrieving a host identifier in a header of a data packet [see column 32 -

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lines 39-67 and column 33 - lines 1-22, 'MAC address']; matching said host identifier with a list of host identifiers [see column 32 - lines 39-67 and column 33 - lines 1-22, 'test using the authentication table']; maintaining a state of authentication for a host if a match is found, or if not matched, maintaining a state of authentication for a host if a match is found, or if not matched, maintaining a state of unauthentication for said host [see column 33 - lines 9-33, 'registered', 'registration rejected']; inserting a proxy address in a relay agent address field in the data packet [see column 24 - lines 10-20, 'CM 16 functions as a standard BOOTP relay agent/DHCP Proxy', lines 29-44 and lines 51-63, 'if the first message field is zero, the second network device puts its own connection address into the first message field' and column 26 - lines 36-50]; and transmitting the data packet to an address allocation device to issue or renew said host address if said host is in a state of authentication [see abstract and column 29 - lines 31-48.]

5. **Referring to claims 2, 9, 22, 30, 37,** *Beser* teaches wherein said host identifier is a MAC address [see column 32 - lines 39-67 and column 33 - lines 1-22, 'MAC address'.]

6. **Referring to claims 3, 10, 31, 38,** *Beser* teaches further comprising storing said list of host identifiers in a memory [see column 32 - lines 53-57.]

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7. **Referring to claims 4, 11, 23, 32, 39,** *Beser* teaches further comprising pairing said list of host identifiers with a host information list [see column 10 - lines 31-46 and Table 1.]
8. **Referring to claims 5, 12, 24, 33, 40,** *Beser* teaches further comprising discarding said data packet if said host is in a state of unauthentication [see column 33 - lines 9-33, 'registration rejected'.]
9. **Referring to claim 26,** *Beser* teaches wherein said data packet further comprises a server identifier address field, said server identifier address field having said proxy address [see column 18 - lines 8-48.]

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 6, 13, 28, 34, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Beser* U.S. Patent Number: 6,189,102 (hereinafter referred to as '*Beser*'.)

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12. Referring to claims 6, 13, 28, 34, 41, *Beser* teaches a method for issuing or renewing a host address [see column 32 - lines 39-67 and column 33 - lines 1-22, 'MAC address'] however does not set forth the limitation of further comprising querying an accounting device to obtain account information for said host.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to get the advantage of being able to obtain account information of a host in order to determine various types of services that needs to be provided to the host. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include accounting device containing account information for the host.

13. Claims 7, 14-19, 27, 35, 43-49 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Beser* U.S. Patent Number: 6,189,102 (hereinafter referred to as '*Beser*') and further in view of Michael Patrick, "DHCP Relay Agent Information Option" Motorola ISG, July 30, 1997 (hereinafter referred to as "*Michael*".)

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14. **Referring to claims 7, 14, 27, 35, 43,** *Beser* teaches inserting a proxy address in a relay agent address field in the data packet [see column 24 - lines 10-20, 'CM 16 functions as a standard BOOTP relay agent/DHCP Proxy', lines 29-44 and lines 51-63, 'if the first message field is zero, the second network device puts its own connection address into the first message field' and column 26 - lines 36-50] however does not set forth the limitation of wherein said inserting step further comprises flagging an option 82 option in said data packet. *Michael* teaches a use of option 82 with DHCP protocol to prevent several security attacks on the operation of IP address assignment, including IP spoofing, Client ID spoofing, MAC address spoofing, and DHCP server address exhaustion [see *Michael* page 5 - paragraphs 1,2,3 and page 10 - paragraphs 2,3,4,5,6.]

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the system of *Beser* to implement option 82 in order to prevent several security attacks on the operation of IP address assignment, including IP spoofing, Client ID spoofing, MAC address spoofing, and DHCP server address exhaustion. It is for this reason that one of ordinary skill in the art would have been motivated to use option 82 to prevent various types of security attacks on the operation of IP address assignment.

15. **Referring to claims 15, 44, 52**, a method and an apparatus for issuing or renewing a host address, comprising: retrieving a host identifier in a header of a DHCP request packet [see column 32 - lines 39-67 and column 33 - lines 1-22, 'MAC address']; matching said host identifier with a list of host identifiers [see column 32 - lines 39-67 and column 33 - lines 1-22, 'test using the authentication table']; maintaining a state of authentication for a host if a match is found, or if not matched, maintaining a state of unauthentication for said host [see column 33 - lines 9-33, 'registered', 'registration rejected']; inserting a proxy address in a relay agent address field in the data packet [see column 24 - lines 10-20, 'CM 16 functions as a standard BOOTP relay agent/DHCP Proxy', lines 29-44 and lines 51-63, 'if the first message field is zero, the second network device puts its own connection address into the first message field' and column 26 - lines 36-50]; transmitting the data packet to an address allocation device if said host is in a state of authentication [see abstract and column 29 - lines 31-48]; setting said proxy address in a server identifier address field in a DHCP offer packet having an assigned host address, said DHCP offer packet received from said address allocation device in response to said DHCP request packet [see

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column 18 - lines 8-48]; however does not set forth the limitation of wherein said inserting step further comprises flagging an option 82 option in said data packet. *Michael* teaches a use of option 82 with DHCP protocol to prevent several security attacks on the operation of IP address assignment, including IP spoofing, Client ID spoofing, MAC address spoofing, and DHCP server address exhaustion [see *Michael* page 5 - paragraphs 1,2,3 and page 10 - paragraphs 2,3,4,5,6.]

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the system of *Beser* to implement option 82 in order to prevent several security attacks on the operation of IP address assignment, including IP spoofing, Client ID spoofing, MAC address spoofing, and DHCP server address exhaustion. It is for this reason that one of ordinary skill in the art would have been motivated to use option 82 to prevent various types of security attacks on the operation of IP address assignment.

16. **Referring to claims 16, 45,** *Beser* teaches wherein said host identifier is a MAC address [see column 32 - lines 39-67 and column 33 - lines 1-22, 'MAC address'.]

17. **Referring to claims 17, 46,** *Beser* teaches further comprising storing said list of host identifiers in a memory [see column 32 - lines 53-57.]

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18. **Referring to claims 18, 47,** *Beser* teaches further comprising pairing said list of host identifiers with a host information list [see column 10 - lines 31-46 and Table 1.]

19. **Referring to claims 19, 48,** *Beser* teaches further comprising discarding said data packet if said host is in a state of unauthentication [see column 33 - lines 9-33, 'registration rejected'.]

20. **Referring to claims 49,** *Beser* teaches a method for issuing or renewing a host address [see column 32 - lines 39-67 and column 33 - lines 1-22, 'MAC address'] however does not set forth the limitation of further comprising querying an accounting device to obtain account information for said host.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to get the advantage of being able to obtain account information of a host in order to determine various types of services that needs to be provided to the host. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include accounting device containing account information for the host.

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Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to issuing and renewing a host address:

Fijolek et al. U.S. Patent Number: 6,240,464

Arutyunov U.S. Patent Number: 6,611,868

Subramaniam et al. U.S. Patent Number: 6,070,187

Lim et al. U.S. Patent Number: 5,884,024

Dulman U.S. Patent Number: 5,915,008

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (703) 305 4893. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (703) 308 3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
07/30/2004



JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100